

AUG 16 2004

PTO/SB/08A (08-03)

<p>Substitute for form 1449A/P FEB 2001 U.S. PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)</p>				Complete If Known	
				Application Number	10/661,373
				Filing Date	September 12, 2003
				First Named Inventor	Kyosuke Achiwa
				Art Unit	2155
				Examiner Name	Unassigned
Sheet	1	of	3	Attorney Docket Number	16869P-094500US

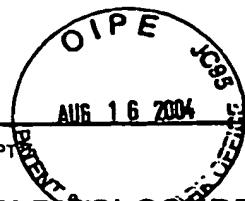
U.S. PATENT DOCUMENTS+					
Examiner Initials*	Cite No.	Document Number Number Kind Code <sup>3</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
UR	1	US-6,647,474	11-11-2003	Yanai et al	
	2	US-6,625,705	09-23-2003	Yanai et al	
	3	US-2003/167419	09-04-2003	Yanai et al.	
	4	US-6,587,919	07-01-2003	Yanai et al	
	5	US-6,539,482	03-25-2003	Mikkelsen et al.	
	6	US-6,502,205	12-31-2002	Yanai et al	
	7	US-6,418,509	07-09-2002	Yanai et al	
	8	US-6,247,046	06-12-2001	Yanai et al	
	9	US-6,230,239	05-08-2001	Sakaki et al.	
	10	US-6,185,653	02-06-2001	Yanai et al	
	11	US-6,173,377	01-09-2001	Yanai et al	
	12	US-6,003,114	12-14-1999	Bachmat.	
	13	US-5,998,045	11-30-1999	Lee et al.	
	14	US-5,978,890	11-02-1999	Ozawa et al.	
	15	US-5,960,218	09-29-1999	Vishlitzky et al	
	16	US-5,940,865	08-17-1999	Ohzora et al.	
	17	US-5,909,692	06-01-1999	Yanai et al	
	18	US-5,901,327	05-04-1999	Ofek.	
	19	US-5,898,548	04-20-1999	Ofek.	
	20	US-5,835,954	11-10-1998	Duyanovich et al.	
	21	US-5,819,020	10-06-1998	Beeler	
	22	US-5,742,792	04-21-1998	Yanai et al.	
	23	US-5,742,792	04-21-1998	Yanai et al	
	24	US-5,740,465	04-14-1998	Matsunami et al.	
	25	US-5,692,155	11-25-1997	Iskiyan et al.	
	26	US-5,680,640	10-21-1997	Ofek et al.	
	27	US-5,664,144	09-02-1997	Yanai et al	
	28	US-5,644,787	07-01-1997	Nakamura et al.	
	29	US-5,625,840	04-29-1997	Numata et al.	
	30	US-5,613,155	03-18-1997	Baldiga et al.	
	31	US-5,588,012	12-24-1996	Oizumi.	
	32	US-5,572,699	11-05-1996	Kamo et al.	
	33	US-5,544,347	08-06-1996	Yanai et al.	
	34	US-5,544347	08-06-1996	Yanai et al	
	35	US-5,379,398	01-03-1995	Cohn et al.	
	36	US-5,247,665	09-21-1993	Matsuda et al.	
	37	US-5,235,690	08-10-1993	Beardsley et al.	
	38	US-5,206,939	04-27-1993	Yanai et al.	
	39	US-5,155,845	10-13-1992	Beal et al.	
	40	US-4,451,884	05-29-1984	Heath et al.	
UR	41	US-3,990,055	11-02-1976	Henderson et al.	

FOREIGN PATENT DOCUMENTS					
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, T <sup>4</sup>

Examiner Signature	Kevin L. Ellis	Date Considered	10/12/05
--------------------	----------------	-----------------	----------

<sup>1</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>2</sup> Applicant's unique citation designation number (optional). <sup>3</sup> Kind Codes of U.S. Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 801.04. <sup>4</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>5</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>6</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>7</sup> Applicant is to place a check mark here if English language Translation is attached.

60161553 v1



Substitute for form 1449A/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 2 of 3 Attorney Docket Number 16869P-094500US

## Complete if Known

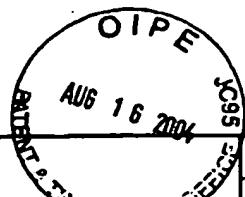
Application Number	10/661,373
Filing Date	September 12, 2003
First Named Inventor	Kyosuke Achiwa
Art Unit	2155
Examiner Name	Unassigned

		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
UK	42	JP	2000-305856		11-02-2000	Hitachi Ltd.		<input checked="" type="checkbox"/>
	43	JP	11-338847		12-10-1999	Hitachi Ltd.		<input checked="" type="checkbox"/>
	44	JP	09-325863		12-18-1997	Hitachi Ltd.		<input checked="" type="checkbox"/>
	45	JP	07-201132		08-04-1995	Mitsubishi Electric Corp		<input checked="" type="checkbox"/>
	46	JP	07-191811		07-28-1995	Hitachi Ltd		<input checked="" type="checkbox"/>
	47	JP	06-250795		09-09-1994	Hitachi Ltd		<input checked="" type="checkbox"/>
	48	JP	06-067811		03-11-1994	Fuji Xerox Co. Ltd		<input checked="" type="checkbox"/>
	49	JP	03-204023		09-05-1991	Fujitsu Ltd.		abstract only
	50	JP	02-059934		02-28-1990	NEC Corp		abstract only
	51	JP	64-033770		02-03-1989	NEC Corp		abstract only
	52	JP	58-219656		12-12-1983	Hitachi Ltd.		abstract only
UK	53	JP	58-151660		09-08-1983	Hitachi Ltd.		abstract only
1								

Examiner Signature	Kevin L. Ellis	Date Considered	10/12/05
--------------------	----------------	-----------------	----------

<sup>3</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Kind Codes of U.S. Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

60161553 v1



Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet

3

of

3

**Complete If Known**

Application Number	10/661,373
Filing Date	September 12, 2003
First Named Inventor	Kyosuke Achiwa
Art Unit	2155
Examiner Name	Unassigned
Attorney Docket Number	16869P-094500US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
JK	54	ROSENBLUM "The Design and Implementation of a Log-Structured File System," ACM Transactions on Computer Systems 10:26-52 (1992).	
JK	55	"Symmetrix Data Migration Services (SDMS)" EMC <sup>2</sup> Symmetrix ICDA Family Product Information (2000).	

Examiner Signature	Kevn L. Elks	Date Considered	10/12/05
--------------------	--------------	-----------------	----------

<sup>1</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>2</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449A/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>		<b>Complete If Known</b>	
Sheet	1	of	1
		Application Number	10/661,373
		Filing Date	September 12, 2003
		First Named Inventor	Kyosuke Achiwa
		Art Unit	2155
		Examiner Name	Unassigned
		Attorney Docket Number	16869P-094500US

<b>U.S. PATENT DOCUMENTS+</b>					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

<b>FOREIGN PATENT DOCUMENTS</b>						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code <sup>3</sup>	Number <sup>4</sup> Kind Code <sup>5</sup> (if known)			
113	1	PCT	WO 01/04754 A2	01-18-2001	Hitachi Data Systems	<input type="checkbox"/>
113	2	PCT	WO 98/20419 A1	05-14-1998	Vinca Inc.	<input type="checkbox"/>

Examiner Signature	<i>Nevin L. Ellis</i>	Date Considered	10/12/05
--------------------	-----------------------	-----------------	----------

<sup>1</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>2</sup>Applicant's unique citation designation number (optional). <sup>3</sup>Kind Codes of U.S. Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>4</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>5</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>6</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>7</sup>Applicant is to place a check mark here if English language Translation is attached.  
60299204 v1

Substitute for form 1449A/PTO


**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1 of 2

Complete If Known	
Application Number	10/661,373
Filing Date	September 12, 2003
First Named Inventor	Kyosuke Achiwa
Art Unit	2188
Examiner Name	Kevin L. Ellis
Attorney Docket Number	16869S-094500US

**U.S. PATENT DOCUMENTS+**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Kind Code <sup>2</sup> (if known)			
JKR	1	US-6,804,755	10-12-2004	Selkirk et al.	
	2	US-2004/0167942 A1	08-26-2004	Oshinsky et al.	
	3	US-6,779,094	08-17-2004	Selkirk et al.	
	4	US-6,760,723 B1	07-06-2004	Oshinsky et al.	
	5	US-6,647,473	11-11-2003	Golds et al.	
	6	US-6,594,744	07-15-2003	Humlcek et al.	
	7	US-2002/0116404 A1	08-22-2002	Cha et al.	
	8	US-6,378,054 B1	04-23-2002	Karasudani et al.	
	9	US-2002/0015336 A1	02-07-2002	Watkins et al.	
	10	US-5,845,328	12-01-1998	Maya et al.	
JKR	11	US-5,522,037	05-28-1996	Kitagawa et al.	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				

Examiner Signature	Kevin L. Ellis	Date Considered	10/12/05
--------------------	----------------	-----------------	----------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Kind Codes of U.S. Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

60469667 v1

Substitute for form 1449B/PTO				<b>Complete If Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				<i>Application Number</i>	10/661,373
<i>(use as many sheets as necessary)</i>				<i>Filing Date</i>	September 12, 2003
				<i>First Named Inventor</i>	Kyosuke Achiwa
				<i>Art Unit</i>	2188
				<i>Examiner Name</i>	Kevin L. Ellis
Sheet	2	of	2	<i>Attorney Docket Number</i>	16869S-094500US

<b>NON PATENT LITERATURE DOCUMENTS</b>				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		
UK	12	BURNS et al. "A Linear Time, Constant Space Differencing Algorithm," IEEE proceedings of the 1997 Performance, Computing, and Communications Conference pp. 429-436 (February 1997).		
UK	13	SVOBODOVA "File Servers For Network-Based Distributed Systems," ACM Computing Surveys 16:353 - 398 (December 1984).		

Examiner Signature	Kevin L. Ellis	Date Considered	10/12/05
--------------------	----------------	-----------------	----------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 1

## Complete If Known

Application Number	10/661,373
Filing Date	September 12, 2003
First Named Inventor	Kyosuke Achiwa
Art Unit	2188
Examiner Name	Kevin L. Ellis

Attorney Docket Number 16869S-094500US

## U.S. PATENT DOCUMENTS+

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Kind Code <sup>2</sup> (if known)			
UK	1	US-6,871,705	12-30-2003	Duprey et al.	
	2	US-8,587,935	07-01-2003	Otek	
	3	US-6,578,120	06-10-2003	Crockett et al.	
	4	US-6,487,645	11-26-2002	Clark et al.	
UN	5	US-6,286,085	09-04-2001	Jouenne et al.	

## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				

Examiner Signature	Kevin L. Ellis	Date Considered	10/12/05
--------------------	----------------	-----------------	----------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Kind Codes of U.S. Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language Translation is attached. <sup>6</sup> 60545052 v1